Perchlorate Projects

March 1999

AWWA Research Foundation

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Water Resources

Water Quality

National Assessment of Perchlorate Contamination Occurrence [#2508]

Metropolitan Water District of Southern California (Los Angeles) and Montgomery Watson

Will identify areas across the United States at high potential for environmental perchlorate contamination, and rank the likelihood of the presence of perchlorate contamination in a water utility source water. Will conduct targeted sampling at those utilities most likely to be impacted by perchlorate contamination. ***To be completed in 2001.***

Water Treatment

Inorganic Contaminant Removal and Control

Application of Bioreactor Systems to Low-Concentration Perchlorate-Contaminated Water [#2530]

Northwestern University

Will evaluate the efficiency of a biological process to reduce perchlorate concentrations of up to 1,000 micrograms per liter to levels of 4-18 micrograms per liter. Will also evaluate the impact of co-contaminants on process performance, characterize process effluents, and define post treatment requirements. ***To be completed in 2001.***

Application of Bioreactor Systems to Low-Concentration Perchlorate-Contaminated Water [#2577]

Pennsylvania State University

Will evaluate the efficiency of a biological process to reduce perchlorate concentrations of up to 1,000 micrograms per liter to levels of 4-18 micrograms per liter. Will also evaluate the impact of co-contaminants on process performance, characterize process effluents, and define post treatment requirements. ***To be completed in 2001.***

Investigation of Methods for Perchlorate Destruction in Aqueous Waste Stream [#2536]

Pennsylvania State University

Will evaluate non-biological technologies for destruction of perchlorate to allow waste stream disposal or recycle. ***To be completed in 2000.***

Investigation of Methods for Perchlorate Destruction in Aqueous Waste Stream [#2578]

Clarkson University

Will evaluate non-biological technologies for destruction of perchlorate to allow waste stream disposal or recycle. ***To be completed in 2000.***

Removal of Perchlorate and Bromate in Conventional Ozone/Granular Activated Carbon Systems [#2535]

University of Illinois and Metropolitan Water District of Southern California (Los Angeles)

Will determine whether conventional ozone/granular activated carbon systems can be modified to remove perchlorate and bromate without sacrificing system performance. ***To be completed in 2001.***

Treatability of Perchlorate-Containing Water by Reverse Osmosis and Nanofiltration [#2531]

University of Colorado, National Institute of Standards and Technology, and Metropolitan Water District of Southern California (Los Angeles)

Will determine concentration ranges treatable by reverse osmosis and nanofiltration. Will evaluate effects of water quality parameters on process performance and perchlorate removal. ***To be completed in 2001.***

Treatability of Perchlorate in Groundwater Using Ion Exchange Technology [#2532]

University of Houston

Will develop an optimized ion exchange process to address low concentration perchlorate contamination of groundwater. ***To be completed in 2001.***